

REMARKS

In response to the Office Action, Applicant respectfully requests the Examiner to reconsider the present application in view of the foregoing amendments and the following comments.

Discussion of Claim Rejections Under 35 U.S.C. § 102

Claim 57-59, 62-65, 77-81, and 83-85 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Fujita et al., (U.S. 7,388,038).

Claim 57-59, 62-65, 77-81, and 83-85 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Fujita (WO 00/20498)

While the reference Fujita et al., (U.S. 7,388,038) is a divisional application of Fujita (U.S. Publication Number 2004/0029990) which is continuation of Fujita (WO00/20498), Applicant addresses above two rejections together and respectfully submits that pending claims are allowable over Fujita et al., as discussed below.

Discussion of Patentability of Independent Claim 57

Claim 57, as amended herein, recites dimethyl or methyl derivatives of the ester compounds as active component. * As the Examiner acknowledged in the Office Action, Fujita (WO00/20498) does not teach using dimethyl derivatives of the ester compounds. Thus, each of cited references fails to teach or suggest each and every element of Claim 57 either expressly or inherently. Applicant respectfully submits that Claim 57 is not anticipated by the cited reference, and Claim 57 is allowable over the prior art of record.

Discussion of Patentability of Dependent Claims

The rest of the rejected claims depend from base Claim 57, and further define additional technical features of the present invention. In view of the patentability of Claim 57, and in further view of the additional technical features, Applicants respectfully submit that the dependent claims are patentable over the prior art.

Discussion of Claim Rejections Under 35 U.S.C. § 103

Claim 66-69 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Fujita (WO0020498, English equivalent: U.S. Publication Number 2004/0029990). As amended herein, the subject matter of Claim 66 is incorporated in Claims 57 and the dependencies of Claims 67-69 have been changed to Claim 57, Applicant addresses this issue as patentability of Claim 57 and respectfully submits that pending claims are allowable over Fujita et al., as discussed below.

Claim 57, as amended herein, recites dimethyl or methyl derivatives of the ester compounds as active component. In rejecting the claims, the Examiner acknowledged that Fujita does not teach using dimethyl derivatives of the ester compound, and took the position that it would have been obvious to expect similar beneficial results by using butyl oleate, dioctyl adipate, isodecyl succinate, dioctyl sebacate, and dibutyl sebacate. However, the data in the Declaration submitted herewith, indicates a significant and unexpected difference between “New comparative example” in which dioctyl adipate was used and “New Example” in which the claimed methyl ester was used in curing time after storage. Accordingly, the data proves that the advantages of the use of the recited methyl ester do not “flow naturally from following the suggestion of the prior art” use of dioctyl adipate. Thus, the Examiner’s assumption that the compounds of Fujita are interchangeable with the recited methyl ester is not applicable to the pertinent art of the claimed invention. Therefore, Applicants respectfully submits that no prima facie case of obviousness is established with respect to Claim 57. Consequently, Claims 66-69 are patentable.

Discussion of Claim Rejections Under 35 U.S.C. § 103

Claim 66-69 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Fujita (WO0020498, English equivalent: U.S. Publication Number 2004/0029990) in view of Furukawa (U.S. Patent Number 4,482,678). As amended herein, the subject matter of Claim 66 is incorporated in Claims 57 and the dependencies of Claims 67-69 have been changed to Claim 57, Applicant addresses this issue as patentability of Claim 57 and respectfully submits that pending claims are allowable over Fujita et al., as discussed below.

In rejecting the claims, the Examiner asserts that although Fujita does not disclose dimethyl or methyl derivatives of the ester compounds, Furukawa teaches that dimethyl adipate and dioctyl adipate are equivalent and interchangeable. Consequently the Examiner equates the combination with the claimed invention. However, Furukawa merely lists diester compounds as a crosslinking agent or a coupling agent for diene rubber, which has nothing to do with the function of the compound II of the present invention. The dimethyl ester of the present invention does not function as a crosslinking agent, or coupling agent for the vinyl polymer (I) of the present invention and does not accelerate curing by crosslinking. In particular, as shown in Examples 10 and 11 in Table 3 of Applicant's specification, an improvement of retarded curing after the storage can also be obtained by addition of monomethyl ester compound. Therefore, one with ordinary skill in the art readily recognizes that the effect of the present invention is not attributed to the function of a crosslinking agent or coupling agent, and that Furukawa's teaching of the interchangeability of the dimethyl adipate and dioctyl adipate would not be applicable considering the nature of the invention. In addition, as discussed above, the test results in the enclosed declaration prove the non- interchangeability. Accordingly, one having ordinary skill in the art would not have a reasonable expectation of achieving successful results by using Furukawa's disclosure. Without such a reasonable expectation of success, no prima facie showing of obviousness can be set forth. Applicants respectfully submit that Claims 57 and 67-69 are patentable over the prior art.

Discussion of the Claim Rejections Under 35 U.S.C. § 103

Claim 82 has been rejected under 35 U.S.C. § 103 as being unpatentable over Fujita et al. in view of Inoue et al. (U.S. Patent No. 6,255,392) Applicant respectfully submits that pending claims are allowable over Fujita et al. and Inoue et al., as discussed below.

As discussed above, Claim 57 which Claim 82 depends from, as amended herein, recites dimethyl or methyl derivatives of the ester compounds as active component, and Fujita fails to teach the limitation, and Inoue does not cure the noted deficiency. Thus, the combination of cited references fails to teach those specific features of the subject matter in Claim 57. Accordingly, the cited references would not match with the present claimed invention, even if combined, and will not lead to a prima facie showing of obviousness. Moreover, these features

provide an unexpected advantage which further evidence the none-obviousness of the claimed invention. In particular, as shown in Tables 4 and 5, Example 22 & 23, and Comparative Examples 11, 12, and 13 show that a use of the recited methyl esters provides a huge impact on the curing time. In the Office Action, the Examiner asserts that curing time decreasing with the addition of DMA does not amount to unexpected results because the DMA is a crosslinking agent for acrylate polymers. However, the initial curing times with or without DMA are the same, as can be seen in these Examples and Comparative Example. Thus it is apparent that DMA does not function as a crosslinking agent. An improvement of retarded curing after the storage can be only seen with the addition of DMA. Therefore, DMA improves retarded curing after the storage, while does not function as a crosslinking agent.

Please also see the data in the Declaration in which dioctyl adipate is used in stead of claimed methyl ester. Dioctyl adipate does not change retarded curing time at all. Example 7 in the specification is the same as new example of the declaration. (the specification include error)

The inventors assume the mechanism of the present effect, improvement of retarded curing after the storage as stated below. The cause of retarded curing after the storage is the decrease in reactivity of silyl group, which is attributed to the ester exchange of alkoxy group in crosslinking silyl group with alcohol generated by the reaction of ester of side chain in the acrylic polymer and an amino group of aminosilane. On the other hands, in the present invention, the addition of methyl ester compound leads to the generation of methanol, where the methyl ester compound functions as a trapping agent. The ester exchange of alkoxy group in crosslinking silyl group with methanol does not result in decrease in reactivity of silyl group.

Accordingly, nothing in the prior art would lead one having ordinary skill in the art to expect these results with regards to either alternative. Therefore, even if prima facie case of obviousness were established, this unexpected result would rebut any such case. Thus, Claim 57 is patentable over the combination of the cited reference. Claim 82 depends from Claim 57, and further defines additional technical features of the present invention. In view of the patentability of Claim 57, and in further view of the additional technical features, Applicants respectfully submit that Claim 82 is patentable over the prior art.

Discussion of Double Patenting

Claims 57-61, 63-69, 71-74, and 75-78 have been rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over Claims 1-9 of U.S. Patent No. 7,388,038 to Fujita et al. As set forth above, the claims as amended herein, are patentably distinct from the entire reference claims. Applicant respectfully requests withdrawal of the rejection based on non-statutory double patenting.

CONCLUSION

In the light of the applicant's amendments to the claims and the foregoing Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

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Filing Date: April 10, 2006

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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Dated: April 14, 2010

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